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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,482	05/09/2005	Hideaki Takase	102456-04331392	7438
26565	7590	07/10/2007		
MAYER, BROWN, ROWE & MAW LLP			EXAMINER	
71 S. WACKER			BERMAN, SUSAN W	
CHICAGO, IL 60606			ART UNIT	PAPER NUMBER
			1711	
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			07/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/507,482

Applicant(s)

TAKASE, HIDEAKI

Examiner

/Susan W. Berman/

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/04</u> . | 6) <input type="checkbox"/> Other: ____ |

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 5, 6, 8, 9 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent basis in claim 1 for the recitation of a component (D) in claim 3. In claim 12, the word “obtainable” renders the claim indefinite because it is not clear whether applicant intends to claim an optical element obtained by curing the composition according to claim 1 or an optical element that can be obtained by other methods as well.

With respect to claim 5, the use of the word “types” renders the claim indefinite because it is not clear what the scope of the possible types is. The claim recites “specific structures (as shown in figures 1 and 2)”. This recitation is indefinite mainly because the specific structures are not shown in the claim. Furthermore, the recitation enclosed by parentheses is not clearly part of the claimed subject matter.

With respect to claims 6, 7 and 9, the specification discloses that the compositions contain a cationic photoinitiator whenever component A2 (epoxy-functional) or component D, an epoxy compound, is present. There is no mention of compositions comprising only (meth)acrylate compounds as component (A) with acrylate component B and both free radical and cationic photoinitiators. See page 6, lines 2-5, and Examples 5-8.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 109 744. EP '744 discloses compositions comprising an acrylated adduct of an epoxy resin, phenoxyethyl acrylate, a different acrylate adduct and free radical photoinitiator. The acrylated epoxy is preferably an acrylated Bisphenol A epoxy, which is said to give the best flexibility and the toughest coatings (page 4, first paragraph). Phenoxyethylacrylate is said to have the best solvent power for the disclosed compositions and to provide a more flexible coating (page 4, lines 12-14). Example 3 anticipates the instant claim.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Gallant (5,851,598). See tables 3 and 4.

Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Kushi et al (4,970,135). See Examples 3-14 for compositions containing a tetrabromophenoxy acrylate compound and phenoxyacrylate with a free radical photoinitiator.

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Claim 5 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakayama et al (5,453,452). See the Abstract and column 3, lines 33-38. Phenoxyethyl (meth)acrylate and polyethoxy di(meth)acrylate of tetrabromobisphenol A are taught as ethylenically unsaturated monomers "C" in column 4, lines 3-21. Photoinitiators are taught in column 4, lines 22-59.

Claims 1, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2 274 120. GB '120 discloses pre-preg compositions comprising a compound containing both acrylate and epoxy functional groups or a mixture of epoxy resin and acrylate resin with both a cationic photoinitiator and a radical photoinitiator. See Example 2.

Claims 1, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 33 39 754. DE '754 discloses compositions comprising acrylated epoxy resins, multifunctional acrylic monomers and oligomers. A photoinitiating system including free radical photoinitiators and cationic photoinitiators is taught. See page 4, paragraph 4, to page 8, paragraph 2.

Claims 1, 2, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 98/39390. WO '390 discloses coating compositions comprising a cationic photoinitiator and a free radical photoinitiator. Glycidyl ethers, including bisphenol A diglycidyl ether, are taught on page 5. Ethylenically unsaturated compounds, including triacrylates, are taught on page 6.

Claims 1, 3, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/63017. WO '017 teaches combining epoxy compounds, acrylate compounds, cationic photoinitiators and free radical photoinitiators to speed the cure of the epoxy components for optical disc production. See page 8, lines 5-25. Reactive diluents include triacrylates (page 21). Epoxy resins based on bisphenols and cycloaliphatic epoxides are taught on page 22. Photoinitiators, including phosphates, are taught on page 23.

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Claims 1-4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Land (4,694,029). Land discloses a hybrid photocure system wherein the composition comprises an epoxy compound, an acrylate monomer, a cationic photoinitiator and a free radical photoinitiator. Diglycidyl ethers of a polyhydric phenol are taught in column 3 and used in Example 3. Tri (meth)acrylates are included in the acrylate monomers taught in column 3 and triacrylates are used in the Examples. Hexafluorophosphate cationic photoinitiators are taught in columns 4-5. Examples 3 and 5 teach the combination of Epon 828, UVR-6110, a triacrylate monomer, cationic photoinitiator and free radical photoinitiator.

Claims 1, 3, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Steinmann et al (5,783,615). Steinmann et al disclose compositions comprising a cationic photoinitiator and a free radical photoinitiator, acrylated diglycidyl ether of a bisphenol A (applicant's "A"), a compound having three or more acrylate groups (applicant's B), and a cycloaliphatic epoxy compound in Examples 16-19 and 22.

Claims 10-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over any of GB 2 274 120, WO 98/39390, WO 99/63017, DE 33 39 754, Land (4,694,029) and Steinmann et al (5,783,615). Each Patentee discloses compositions comprising components corresponding to those set forth in instant claim 1. Therefore, the prior art compositions would be expected to exhibit the same properties as are set forth in claims 10 or 11 in the absence of convincing reasons or evidence to the contrary. Furthermore, the disclosed compositions would be expected to provide an optical component, as set forth in instant claim 12, in the absence of convincing reasons or evidence to the contrary.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rot et al (5,479,555) disclose photopolymerizable compositions for making optical materials having high refractive index wherein tetrabromobisphenol A di(meth)acrylate and phenoxyethyl (meth)acrylate are taught as examples of compounds (III) and (IV) in the compositions (column 7, lines 9-18). Free radical photoinitiators are taught.

Treadway (6,100,313), cited by applicant, discloses compositions for optical coatings comprising diglycidyl ethers, acrylate monomers having an acrylate functionality of not more than two, free radical photoinitiators and cationic photoinitiators.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Susan W. Berman/ whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SB
6/23/2007

/Susan W Berman/
Primary Examiner
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